

REMARKS / ARGUMENTS

Status of Claims

Claims 1-13, 15-31, and 33-43 are pending in the application. Claims 10-13, 15-18 and 28-31 stand rejected. Claims 1 and 16 are objected to. By this Amendment, Applicant has amended Claim 10, 11, 16 – 18 and 28, cancelled Claims 1-9 and 33-43 leaving Claims 10-13, 15-18 and 28-31 for consideration upon entry of the present Amendment.

Applicant respectfully submits that the rejections under 35 U.S.C. §102(b), and 35 U.S.C. §103(a), have been traversed, that no new matter has been entered, and that the application is in condition for allowance.

Claim Objections

In the Office Action, Claims 1 and 16 were objected to for reasons relating to informalities. Applicant appreciates the Examiners recommendation of inserting the term “electrical” between the words “said” and “generator.”

Applicant respectfully submits that the Examiner intended to object to Claim 10 instead of Claim 1. By this Amendment, Applicant has amended Claims 10 and 16 as recommended by the Examiner to overcome these objections.

Accordingly, Applicant respectfully requests the Examiner to reconsider and withdraw these objections, which Applicant considers to be overcome.

Rejections Under 35 U.S.C. §102(b)

Claims 10-13, 15-18 and 28-31 stand rejected under 35 U.S.C. §102(b) as being anticipated by Harada (U.S. Patent Publication 2003/0141200, hereinafter Harada).

Applicant traverses this rejection for the following reasons.

Applicant respectfully submits that “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, *in a single prior art reference.*” *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d

628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987) (emphasis added). Moreover, “[t]he identical invention must be shown in as complete detail as is contained in the *** claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Furthermore, the single source must disclose all of the claimed elements “arranged as in the claim.” *Structural Rubber Prods. Co. v. Park Rubber Co.*, 749 F.2d 707, 716, 223 U.S.P.Q. 1264, 1271 (Fed. Cir. 1984). Missing elements may not be supplied by the knowledge of one skilled in the art or the disclosure of another reference. *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 780, 227 U.S.P.Q. 773, 777 (Fed. Cir. 1985).

In the Office Action, the Examiner states that Harada discloses and electrical generator (261), a purity monitor (235), a valve (258) and a pressure transducer (270). Applicant respectfully disagrees. Applicant respectfully submits that the components disclosed by Harada are either not the same components as the limitations of independent Claim 10 or are not actually the component asserted by the Examiner.

The electrical generator of Claim 1 is an apparatus for **producing** electrical energy through the rotation of a magnetic field that induces electrical current in a winding. To increase efficiency by reducing drag on the parts and increase thermal transfer, the rotating parts of an electrical generator are operated in a housing filled with hydrogen gas. [Present Application, Paragraph [17] – [20]]. The electrical generator produces electrical power that is then used to power the electrical utility network for example.

In contrast to the electrical generator required by Claim 10, the component (261) cited by the Examiner is a power source. [Harada, Page 12, Paragraph [0179]]. The power source (261) otherwise known as a power supply or power electronics, is a device used to **convert** electrical power to have the necessary characteristics needed by the electrolysis device 201 to disassociate the water and produce hydrogen and oxygen gas. [see Harada, Page 7, Paragraph [0101] for a discussion of power source (9)]. The power source (261) is not connected to the hydrogen generator by a gas conduit but rather an electrical circuit. Since the power source (261) is not fluidly or gaseously connected to of

the system disclosed by Harada, Applicant respectfully submits that the Harada simply can not disclose a vent line, a purity monitor or a pressure transducer coupled to an electrical generator.

With respect to the purity monitor (235), Applicant respectfully submits that item (235) cited by the Examiner is not a hydrogen purity monitor but rather a water resistivity meter. [Harada, Page 13, Paragraph [0191]]. The resistivity meter measures parameters related to the water that is used in the electrolysis process. For purposes of clarity, Applicant has amended Claim 10 to recite that the purity meter is a hydrogen purity meter. Further, Applicant finds no reference in Harada that the resistivity meter is coupled to transmit a signal to a gas vent line as required by independent Claim 10.

The Examiner cited valve (258) as being a valve connected to a vent line. While Applicant finds that the valve (258) is a valve connected to a vent, Harada further discloses that this is an “emergency discharge valve.” [Harada, Page 14, Paragraph [0201]]. Applicant respectfully submits that an emergency valve is significantly different from a valve coupled to a purity monitor for maintaining hydrogen purity levels in an electrical generator. The term “emergency” means “a sudden, urgent, usually unexpected occurrence or occasion requiring immediate action.” [“emergency.” *Dictionary.com Unabridged (v 1.1)*. Random House, Inc. 01 Nov. 2007]. Applicant respectfully submits that an “emergency valve”, in the context used by Harada, is to be used in the event of an unexpected abnormal condition that requires immediate action to prevent harm or damage to the equipment. This is not the same as a valve that is used to release contaminated hydrogen gas that is expected to be detected by the purity monitor on a regular basis. Additionally, as discussed above, since Harada does not disclose an electrical generator, the valve (258) simply can not be connected to it by a vent line. Further, Applicant finds no disclosure by Harada that the valve receives a signal.

The Examiner also states that Harada discloses a pressure transducer (270). Applicant respectfully submits that the pressure controller (270) of Harada senses water pressure and not gas pressure. [Harada, Page 16, Paragraph [0226] – [0228]]. The pressure transducer required by Claim 10 is significantly different than the pressure

controller (270) disclosed by Harada. Figure 13 of Harada illustrates that the pressure controller (270) is coupled by between the bottom of the water contained hydrogen pressure vessel (202) and the bottom of oxygen vessel (262). The pressure controller detects a transferred volume of pure water and alleviates differential pressure between the oxygen and hydrogen storage vessels. This is in contrast to independent Claim 10 which requires that the pressure transducer be coupled to a gas conduit and that it transmit a signal to the hydrogen generator in response to the gas pressure in the electrical generator falling below a threshold. Claim 10 further includes the limitation that the hydrogen generator produces hydrogen gas in response to the pressure transducer signal. Accordingly, Applicant respectfully submits that Harada does not disclose a gas pressure transducer as required by independent Claim 10.

In the office action, Examiner further states that the hydrogen generator is configured to generate hydrogen gas at a second threshold pressure in response to a reduction in the electrical generator "(i.e. 201, [0201]." [paper 20070910, page 3]. Applicant respectfully disagrees. First, it appears that the Examiner may have confused the hydrogen electrolysis cell 201 with an electrical generator. In the first paragraph on page 3, the Examiner correctly identifies the electrolysis cell as item 201. However in the second paragraph, the electrical generator is referenced as item 201. As discussed above, Harada simply does not disclose an electrical generator. Applicant further requests clarification of this rejection.

Accordingly, Applicant submits that Harada does not disclose all of the claimed elements arranged as in independent Claim 10, and absent anticipatory disclosure in Harada of each and every element of the claimed invention arranged as in the claim, Harada cannot be anticipatory. Accordingly, Applicant respectfully submits that the Examiner's rejection under 35 U.S.C. §102(b) has been traversed, and requests that the Examiner reconsider and withdraw of this rejection.

Claims 11-13 and 15-18 depend either directly or indirectly from independent Claim 10 and therefore incorporate all of the limitations of the parent claim. For at least the reasons discussed above with respect to independent Claim 1, Applicant respectfully

submits that dependent Claims 11-13 and 15-18 are not anticipated by Harada. The dependent claims further include additional limitations not found in Harada. For example, Claims 17 and 18 further define a purity threshold for hydrogen in the electrical generator. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. § 102(b) and allowance of Claims 10-13 and 15-18 is respectfully requested.

The Examiner also rejected independent Claim 28 under 35 U.S.C. § 102(b) as being anticipated by Harada. For the reasons discussed above with respect independent Claim 1, which are incorporated here by reference, Applicants respectfully disagree. Harada simply fails to disclose, teach or suggest an electrical generator, a hydrogen generator coupled to the electrical generator or a vent line coupled to the electrical generator. Harada further fails to teach a hydrogen purity monitor coupled to a valve or a pressure transducer that transmits a signal to a hydrogen generator when the pressure in the electrical generator falls below a threshold. In view of the foregoing, Applicants respectfully request that the Examiner reconsider and withdraw this rejection.

Claims 29-31 depend either directly or indirectly from independent Claim 28 and therefore incorporate all of the limitation of the parent claim. For at least the reasons discussed above with respect to independent Claim 1 and 28, Applicant respectfully submits that dependent Claims 29-31 are not anticipated by Harada. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. § 102(b) and allowance of Claims 28-31 is respectfully requested.

Rejections Under 35 U.S.C. §103(a)

Claims 10-13, 15-18 and 28-31 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Brosnihan et al. (U.S. Patent Publication 2003/0090164 hereinafter Brosnihan) in view of Harada.

Regarding Claims 10-13, 15-18 and 28-31, the Examiner acknowledges that Brosnihan does not specifically disclose a hydrogen generator coupled to an electrical

generator by a conduit and a pressure transducer fluidly coupled to the conduit and looks to Harada to cure this deficiency.

Applicant traverses these rejections for the following reasons.

Applicant respectfully submits that the obviousness rejection based on the References is improper as the References fail to teach or suggest each and every element of the instant invention in such a manner as to perform as the claimed invention performs. For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a prima facie case of obviousness. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). The Examiner must meet the burden of establishing that all elements of the invention are taught or suggested in the prior art. MPEP §2143.03.

The Examiner acknowledges that Brosnihan is deficient in anticipating the claimed invention, and looks to Harada to cure these deficiencies.

Applicant respectfully submits that independent Claims 10 and 28 are not obvious in light of Brosnihan in view of Harada. As discussed above with respect to the rejections under 35 U.S.C. § 102, Harada does not disclose an electrical generator, a conduit coupled to an electrical generator nor a transducer coupled to a conduit. Further, independent Claims 10 and 28 further require that the hydrogen generator produce hydrogen gas in response to a signal from the pressure transducer detecting a pressure drop in the electrical generator. Application respectfully submits that Harada fails to provide the needed disclosure to overcome the deficiencies of Brosnihan.

Further, the combination of Brosnihan and Harada fails to disclose a vent coupled to an electrical generator. The valve releases hydrogen gas to the atmosphere from the electrical generator in response to a signal. This release causes a pressure drop in the electrical generator that is detected by the pressure transducer. As a result of the purity monitor sensing contamination in the hydrogen gas, the hydrogen gas is vented and new hydrogen gas is generated to replenish the electrical generator. Applicant respectfully submits that the combination of Brosnihan with Harada fails to disclose, teach or suggest the claimed combination in such a manner as to perform as the claimed invention

performs. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

With respect to dependent Claims 11-13, 15-18 and 29-31 that depend either directly or indirectly from independent Claims 10 and 28 and therefore incorporate all of the limitations of the parent claim. For at least the reasons discussed above with respect to independent Claims 1 and 28, Applicant respectfully submits that dependent Claims 11-13, 15-18 and 29-31 are not obvious in light of Brosnihan in view of Harada. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. § 103(a) and allowance of Claims 10-13, 15-18 and 28-31 is respectfully requested.

In view of the foregoing, Applicant submits that the References fail to teach or suggest each and every element of the claimed invention and are therefore wholly inadequate in their teaching of the claimed invention as a whole, fail to motivate one skilled in the art to do what the patent Applicant has done, fail to recognize a problem recognized and solved only by the present invention, fail to offer any reasonable expectation of success in combining the References to perform as the claimed invention performs, fail to teach a modification to prior art that does not render the prior art being modified unsatisfactory for its intended purpose, and discloses a substantially different invention from the claimed invention, and therefore cannot properly be used to establish a prima facie case of obviousness. Accordingly, Applicant respectfully requests reconsideration and withdrawal of all rejections under 35 U.S.C. §103(a), which Applicant considers to be traversed.

In light of the foregoing remarks and amendments, Applicant respectfully submits that the proposed amendments and arguments comply with 37 C.F.R. §1.116 and should therefore be entered, and with their entry that the Examiner's rejections under 35 U.S.C. §102(b), and 35 U.S.C. §103(a), have been traversed, and that the application is now in condition for allowance. Such action is therefore respectfully requested.

If a communication with Applicant's Attorneys would assist in advancing this case to allowance, the Examiner is cordially invited to contact the undersigned so that any such issues may be promptly resolved.


The Commissioner is hereby authorized to charge any additional fees that may be required for this amendment, or credit any overpayment, to Deposit Account No. 06-1130.

In the event that an extension of time is required, or may be required in addition to that requested in a petition for extension of time, the Commissioner is requested to grant a petition for that extension of time that is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to the above-identified Deposit Account.

Respectfully submitted,

CANTOR COLBURN LLP

Applicant's Attorneys

By: 

Dave S. Christensen
Registration No: 40,955
Customer No. 23413

Date: November 5, 2007
Address: 55 Griffin Road South, Bloomfield, Connecticut 06002
Telephone: (860) 286-2929
Fax: (860) 286-0115